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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,532	11/12/2003	Isamu Mouri	038788.44893D1	5399

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CROWELL & MORING LLP  
INTELLECTUAL PROPERTY GROUP  
P.O. BOX 14300  
WASHINGTON, DC 20044-4300

EXAMINER

AHMED, SHAMIM

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/705,532

Applicant(s)

MOURI ET AL.

Examiner

Shamim Ahmed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 38-62 is/are pending in the application.
- 4a) Of the above claim(s) 49-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/208,022.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 38-48, drawn to a cleaning process, classified in class 134, subclass 22.1.
  - II. Claims 49-62, drawn to an etching process, classified in class 216, subclass 58.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operations such as the method in invention I directed to cleaning accumulated deposit in a processing apparatus, while the claims in group II are directed to etch a film on a device.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with J.D. Evans on 9/15/05 a provisional election was made **with traverse** to prosecute the invention of Group I, claims 38-48. Affirmation of this election must be made by applicant in replying to this Office action. Claims 49-62 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Specification***

7. The disclosure is objected to because of the following informalities: At the beginning of the specification, the continuing data needs to be updated because the parent application serial No. 09/208,022, filed December 9, 1998 is now US patent 6,673,262.

Appropriate correction is required.

#### ***Information Disclosure Statement***

8. The information disclosure statement filed 11/12/03 including the PTO 892 and PTO 1449 of the parent case serial No. 09/208,022 are merely duplicate, which are filed in the PTO-1449 in the instant application.

Therefore, the listed references in the above are crossed out.

#### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 38 and 47-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakaguchi (JP-8-291299).

Sakaguchi teaches a cleaning process for removing deposits in an apparatus using a cleaning gas comprises a hypofluorite including the claimed pressure and temperature (see paragraphs 0001,0006, 0011, 0013 and 0018 of the translated version of the patent).

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 39-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaguchi (JP-8-291299) in view of Barton et al (4,036,864). Sakaguchi (JP-8-291299) discusses above in the paragraph 10 but fail to teach the hypofluorite compound having at least one OF group in the molecule.

However, Barton et al teach a class of hypofluorite such as trifluoromethyl hypofluorite ( $\text{CF}_3\text{OF}$ ) in addition of inert gas with the advantage of good selectivity, easy handling and with low process temperature (col.3, lines 47-65 and col.4, lines 21-29).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to modify Sakaguchi's hypofluorite compound with the Barton et al's compound with the advantage of performing the fluorination reaction with good selectivity, easy handling and with low temperature as taught by Barton et al.

As to claims 41 and 44, Sakaguchi teaches the cleaning gas also comprises inert gas and oxygen (paragraph 0009)

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Middleton et al (4,568,478) teaches fluoroxy compound such as acyl hypofluorite having general formula of  $\text{X}(\text{CF}_2)_n\text{COOF}$ , which advantageously used in fluorination reaction with longer self-life and easy handling (col.2, lines 30-40 and col.3, lines 3-18).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (571) 272-1457. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G. Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shamim Ahmed  
Primary Examiner  
Art Unit 1765

SA  
September 18, 2005